

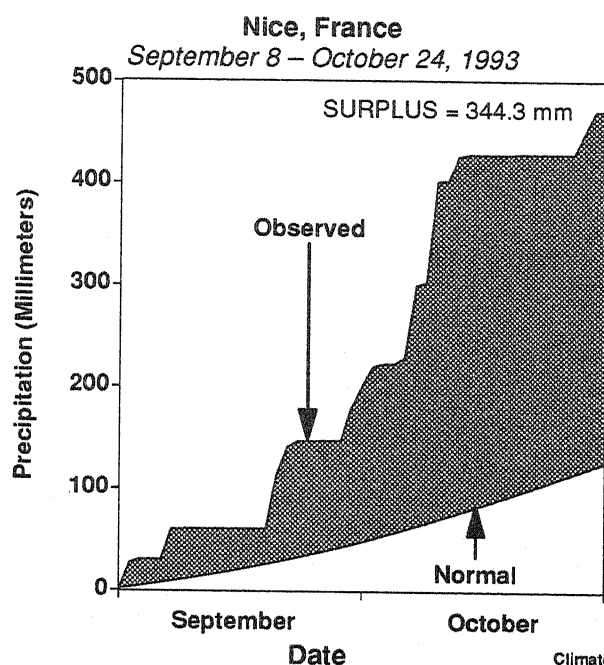
WEEKLY CLIMATE BULLETIN

No. 93/43

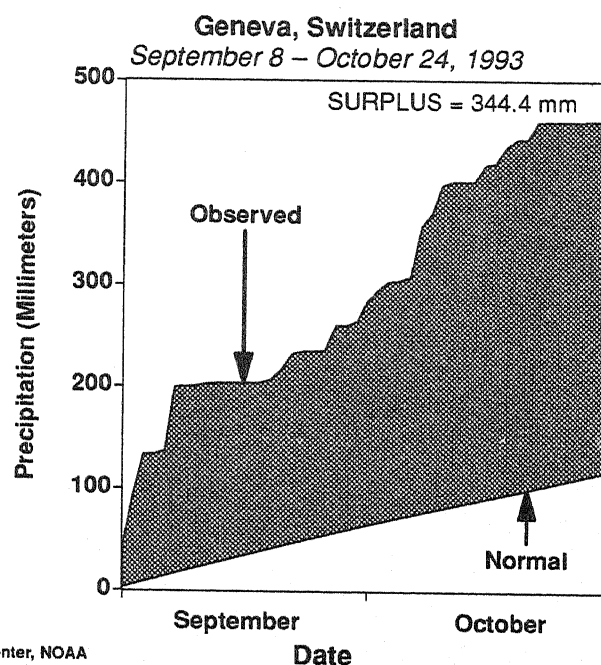
Washington, DC

October 27, 1993

DAILY CUMULATIVE PRECIPITATION vs. NORMAL



Climate Analysis Center, NOAA



NEARLY TWO MONTHS OF HEAVY PRECIPITATION GENERATE LARGE MOISTURE SURPLUSES THROUGH MUCH OF SOUTH-CENTRAL EUROPE. Moderate to heavy precipitation brought an abrupt end to a prolonged dry spell through the region in late August. Since early September, a series of storm systems has generated excessive precipitation from south-central France eastward across northern Italy and the Swiss and Austrian Alps into northwestern portions of former Yugoslavia. Totals exceeding 2 1/2 times the normal for the period were measured across large portions of the region (see inside back cover), and amounts of over 1000 mm fell on parts of south-central Switzerland. Farther south and west, totals of 400–500 mm in sections of northern Italy and southeastern France represented over three times the normal at some locations. According to press reports, rivers and lakes remained high throughout the region, although additional flood-related impacts were minimized by a dry start to last week. In eastern sections of the affected region, however, heavy rains engendered serious flooding in northwestern Croatia, forcing two towns to be declared disaster areas, according to press reports. In sharp contrast, long-term moisture shortages are generating water supply concerns across extreme southeastern Europe and adjacent Turkey, particularly in the Athens, Greece vicinity.



UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE–NATIONAL METEOROLOGICAL CENTER
CLIMATE ANALYSIS CENTER



GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF OCTOBER 3, 1992

1. Alaska and Western Canada:

COLD WEATHER REMAINS ENTRENCHED.

Temperatures averaged as much as 7°C below normal as unseasonably cold weather again dominated the region. Both Anchorage, AK and Fairbanks, AK experienced the coldest September on record [13 weeks].

2. Great Lakes Region and Northern Great Plains:

EARLY SEASON SNOW.

Wintry weather made an early appearance as unusual September snows whitened the Upper Peninsula of Michigan. Snow mixed with rain in upstate New York, and early-season frosts were reported in Minnesota, Iowa, and the Dakotas [Episodic Events].

3. Southwestern United States:

RETURN OF HOT WEATHER ENGENDERS WILDFIRES.

Temperatures averaged up to 6°C above normal in Arizona as highs soared to 43°C. The hot weather abetted forest fires in the Sierra Nevadas as smoked drifted over Reno, NV. Daily record highs topping 30°C penetrated as far north as eastern Washington and western Montana [2 weeks].

4. Southeastern Europe:

DRY POCKETS REMAIN.

Generally less than 20 mm of rain fell in Romania, Bulgaria, and former Yugoslavia, where six-week moisture deficits ranged from 50 to 135 mm. Short-term deficits were reduced in other parts of the afflicted region, and heavy rains (up to 100 mm) brought flooding to northern Italy [Ending at 26 weeks].

5. Turkey and the Middle East:

ANOTHER COLD SNAP.

Temperatures averaged as much as 6°C below normal as yet another cold snap gripped the region [2 weeks].

6. Western Sahel:

STILL DRY.

Little or no precipitation fell in the southern parts of Mali and Mauritania, where precipitation deficits since early September reached 130 mm at some locations. To the south, 30 to 60 mm of rain moistened the Sahel from southern Senegal to western Niger [11 weeks].

7. Pakistan and Northwestern India:

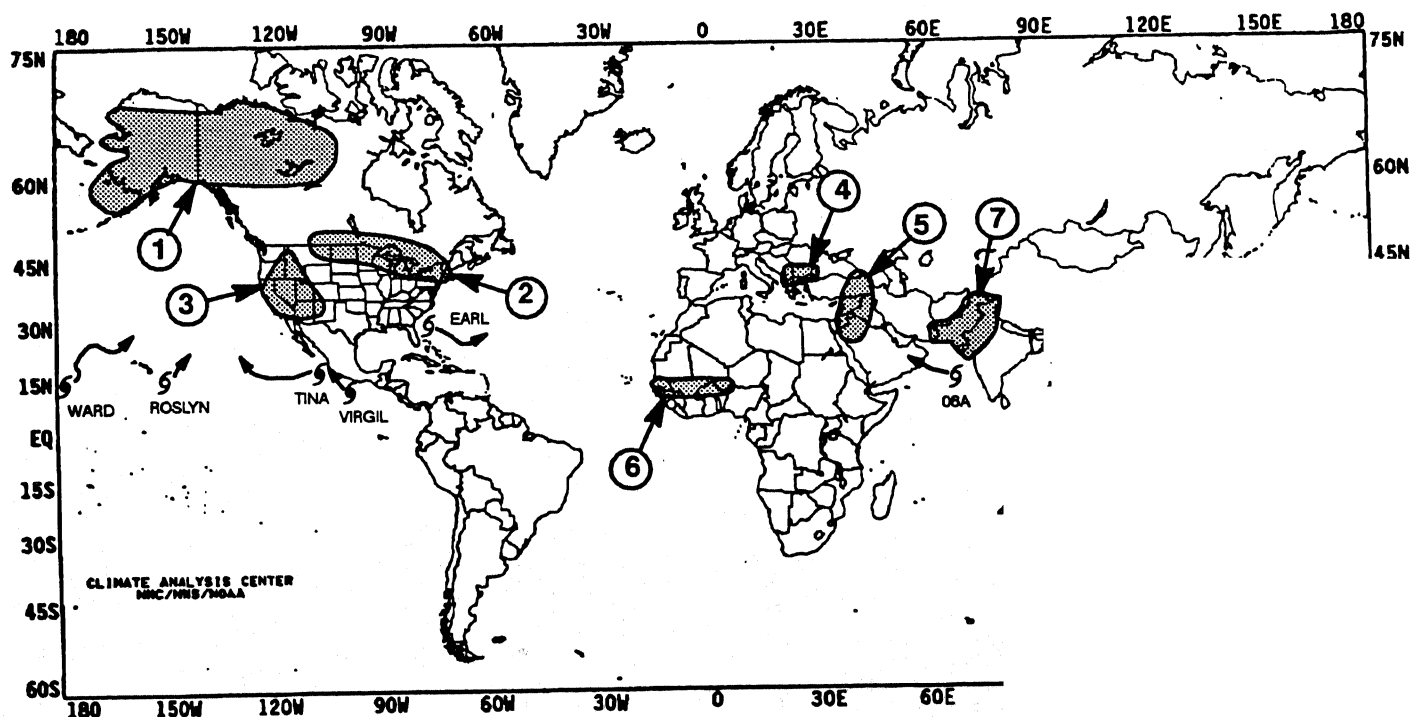
MONSOON WINDS DOWN.

Little or no precipitation was reported in the area as monsoonal rains began their seasonal retreat [Ended at 9 weeks].

8. The Philippines and Southeastern Asia:

DRY WEATHER PREVAILS.

The Philippines measured as much as 40 mm of rain, but the remainder of the region received less than 10 mm. The dry weather brought welcome relief to the Philippines and the eastern coast of China [Ended at 6 weeks], but allowed six-week precipitation deficits to climb up to 125 mm across interior southeastern China [13 weeks].



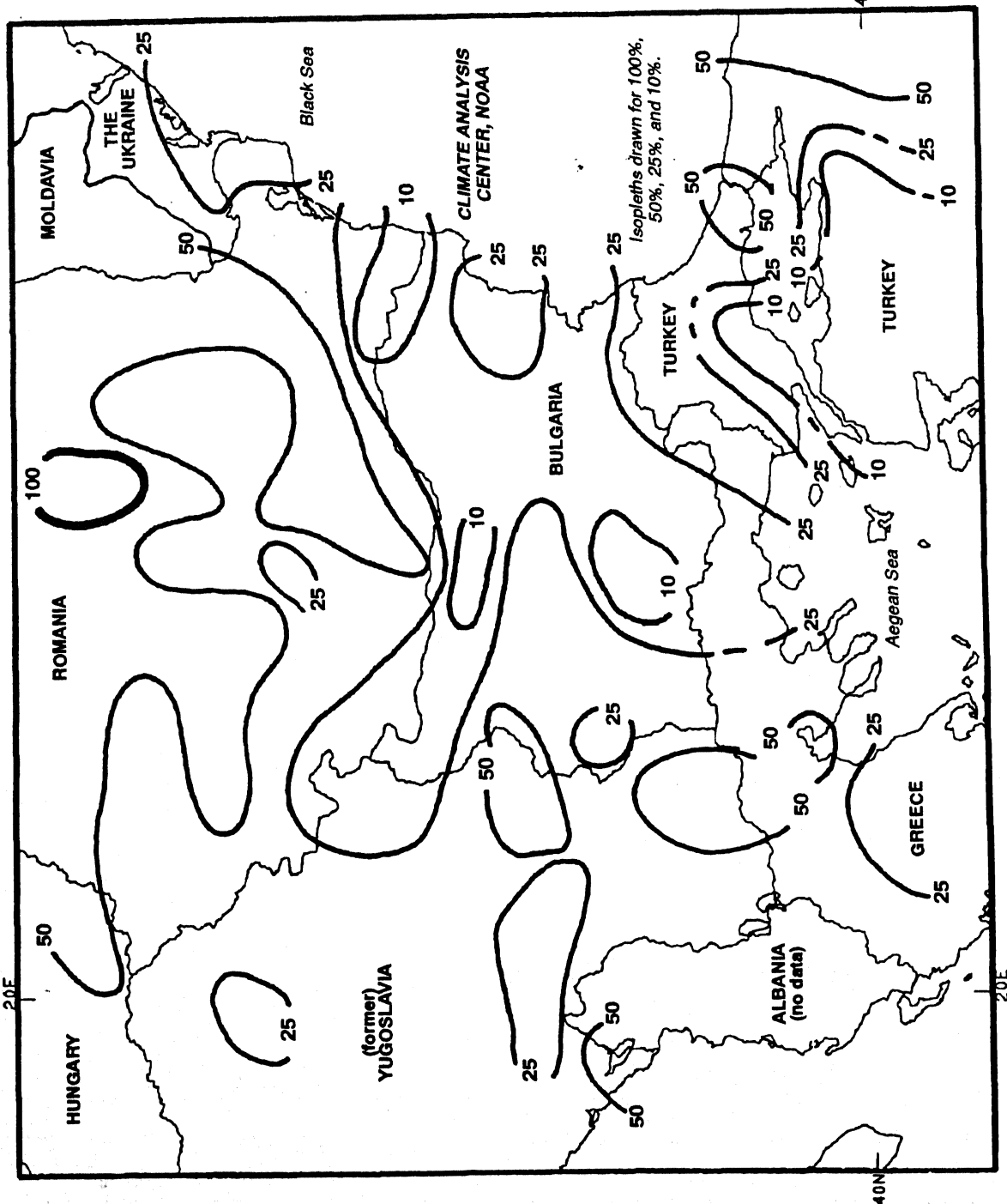
EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation amounts and temperatures are in parentheses. MAP: Approximate locations of major anomalies and episodic events are shown. See other maps for details. Symbols: Temperature anomalies, four week precipitation anomalies, long-term anomalies, and episodic events.

GLOBAL CLIMATE HIGHLIGHTS FEATURE

PERCENT OF NORMAL PRECIPITATION

July 26 – October 3, 1992



NEARLY TWO AND A HALF MONTHS OF VERY DRY WEATHER GRIP SOUTHEASTERN EUROPE. The last half of summer and the first part of autumn tend to be relatively dry across the Balkans and western Turkey, with normal rainfall during July 26 – October 3 ranging from 30 mm in extreme southeastern areas to nearly 140 mm from north-central Romania westward through southeastern Hungary. Central and western sections of former Yugoslavia typically receive 150 – 200 mm. During 1992, however, significantly below normal rainfall was observed for the 69 day period, with parts of central Yugoslavia, Bulgaria, extreme southeastern Romania, Greece, and western Turkey reporting less than 25% of normal. Accumulated deficits ranged from 30 to 85 mm across Greece, Turkey, Bulgaria, and southeastern Yugoslavia while shortfalls of 90 to 180 mm were common in central Yugoslavia and portions of central and southern Romania.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF SEPTEMBER 27 – OCTOBER 3, 1992

Violent weather battered northern and central Florida as a strong storm system moved northward out of the Gulf of Mexico. Several tornadoes touched down in west-central Florida on Saturday, claiming three lives, destroying more than 100 homes, and damaging nearly 300 others. Heavy rains and flooding affected the northern and central portions of the state where two feet of water covered part of U.S. Highway 19 near Cross City, FL on Saturday. Meanwhile, the fifth tropical storm of the year in the Atlantic Ocean developed off the Florida Atlantic coast, generating high surf and some beach erosion. Unusually warm and dry conditions prevailed through the western half of the nation. About six dozen daily record highs were established from California to Michigan, along with several October monthly records. Readings topped 90°F across much of the Far West and northern Plains. The mercury soared to 89°F at Pendleton, OR on Wednesday, breaking a 104-year old record. The hot and dry weather in the Far West engendered a forest fire in the El Dorado National Forest that charred nearly 25,000 acres, destroyed dozens of homes and buildings, forced the closure of fifty miles of Highway 50, and caused over \$200 million in damage, mostly to timber, according to press reports. Elsewhere, unseasonably cold weather continued to grip most of Alaska. Several cities in the state reported the coldest September on record. During the month, numerous record daily and monthly lows were set, including a low of 3°F at Fairbanks on Wednesday. In addition, Fairbanks, AK observed record snowfall for the month with just over two feet reported.

The week began with a storm system in the Great Lakes and its trailing cold front stretching from the Ohio Valley southwestward into the southern Plains. Showers and thunderstorms broke out along and ahead of the front as it raced eastward. Wind gusts up to 50 mph battered parts of the lower Great Lakes and western New England, downing power lines in western New York. Farther south, a tropical depression was poised off the east coast of Florida. This system eventually developed into Tropical Storm Earl late Tuesday. The storm generated rough surf and some beach erosion along the northern half of Florida's east coast before tracking northeastward and away from the contiguous U.S. Meanwhile, unseasonably cold conditions plunged southward out of Canada and into the nation's midsection. Readings in the thirties dipped as far south as northern Arkansas while freezing temperatures prevailed in the

northern Plains and upper Midwest. Elsewhere, hot and dry weather baked the Far West. The mercury soared above 100°F in Arizona and the interior valleys of California.

During the last half of the week, unseasonably warm conditions continued over the western half of the nation. More than two dozen record daily highs were set on Thursday from Washington to North Dakota, and nearly two dozen more were established on Thursday from the northern Plains to the Great Lakes. Farther east, the cold air continued its eastward push, producing more than two dozen record lows from the Tennessee Valley to the Northeast. The earliest measurable snow on record accompanied the cold blast at both St. Johnsbury and Burlington, VT when almost an inch blanketed the ground on Thursday. Farther south, a low developed in the Gulf of Mexico and tracked slowly northeastward, generating heavy rain, wind gusts to 90 mph and numerous tornadoes across the northern half of Florida. Extensive damage was reported around the Tampa, FL area after tornadoes tore across the region. Up to ten inches of rain soaked some locations, causing flooding. Eventually, the low moved through the Southeast and off the South Carolina coast, spreading heavy rain through parts of Georgia and the Carolinas.

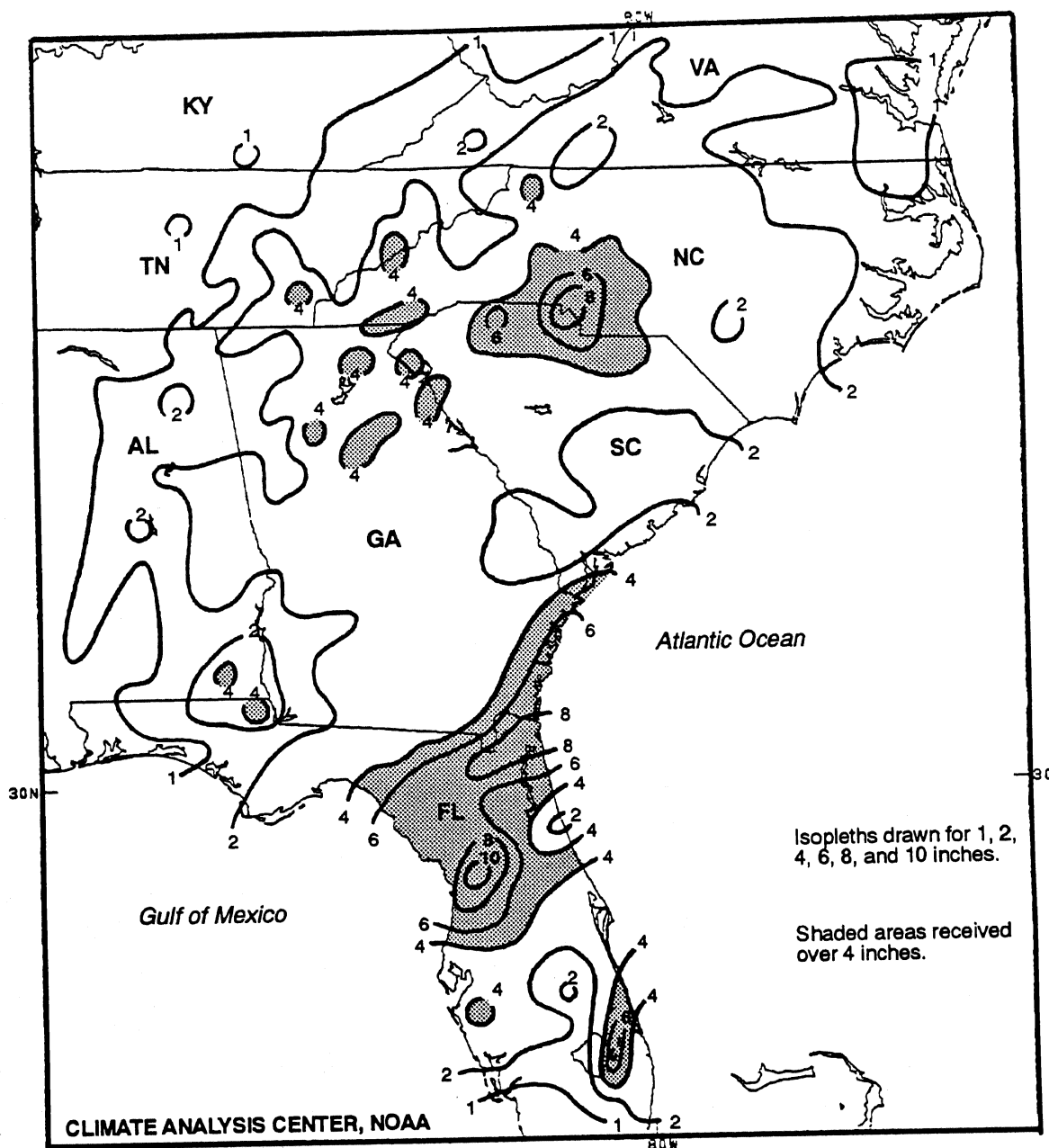
According to the River Forecast Centers, the greatest weekly precipitation totals (more than two inches) were limited to the Southeast and southeastern Alaska. Light to moderate amounts fell in the mid-Atlantic, northern and western New England, the northern Rockies, the western halves of Washington and Oregon, and southern Alaska. Little or no precipitation was reported across the remainder of the contiguous U.S. west of the Appalachians, the northern half of Alaska, and the Hawaiian Islands.

Unusually warm weather enveloped most of the nation from the northern and central Great Plains westward. Weekly departures of +8°F to +11°F were common across the northern Rockies and High Plains while departures of +3°F to +7°F dominated from the upper Midwest to the West Coast.

Unseasonably cold conditions gripped the southern Plains, and east of the Mississippi River. Weekly departures of -3°F to -7°F were common from Texas northeastward to Maine. In Alaska, exceptionally cold weather afflicted most of the state. Weekly departures reached down to -10°F across the northern half of the state, where lows plunged into the single digits.

UNITED STATES CLIMATE HIGHLIGHTS FEATURES

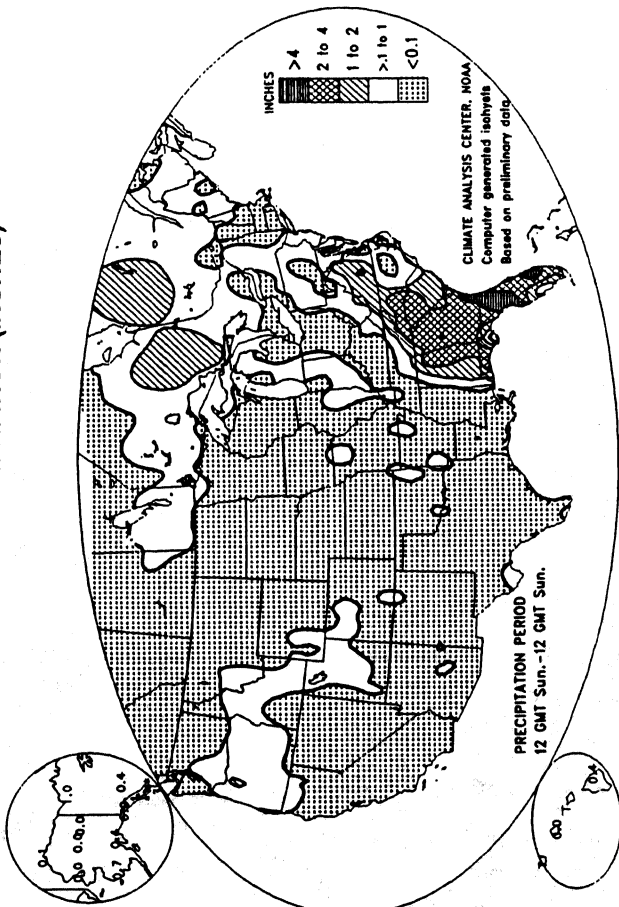
TOTAL PRECIPITATION (IN)
September 27 – October 4, 1992 [8 days]



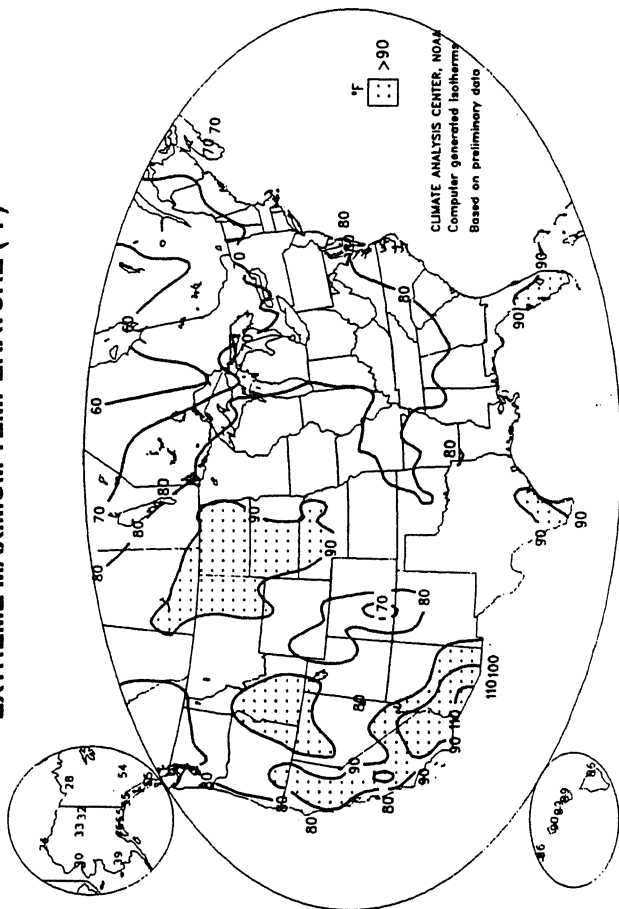
HEAVY RAINS AND SEVERE WEATHER BATTER PORTIONS OF THE SOUTHEAST. A cold front early in the week and a strong low pressure system over the weekend both generated locally heavy rains and scattered outbreaks of severe weather as they swept across the Southeast. Thunderstorms spawned by the first system brought daily rainfall totals of up to 3.5 inches and isolated minor flooding to portions of the mid-Atlantic, the interior Southeast, and eastern Florida. Later in the week, a strong storm system in the Gulf of Mexico tracked northeastward through northern Florida and off the South Carolina coast by late Sunday, dropping large amounts of rain on northern peninsular Florida (daily totals exceeded 8 inches in a few areas). These storms brought widespread street flooding to the Jacksonville, FL area and dropped several large tornadoes in the Tampa-St. Petersburg vicinity. According to press reports, at least three individuals lost their lives as tornadoes destroyed over 500 dwellings near Tampa, FL.

UNITED STATES WEEKLY CLIMATE CONDITIONS (September 27 – October 3, 1992)

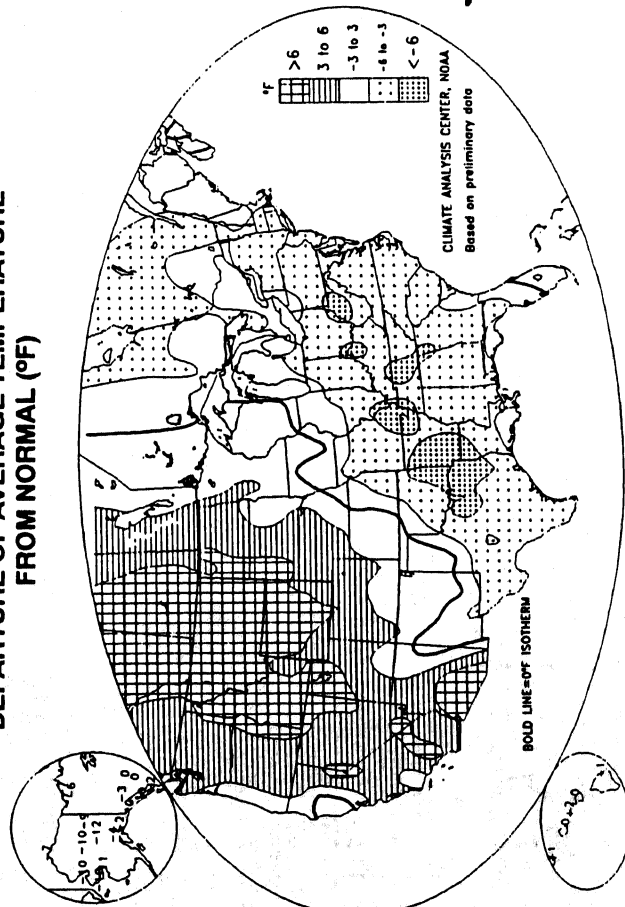
OBSERVED PRECIPITATION (INCHES)



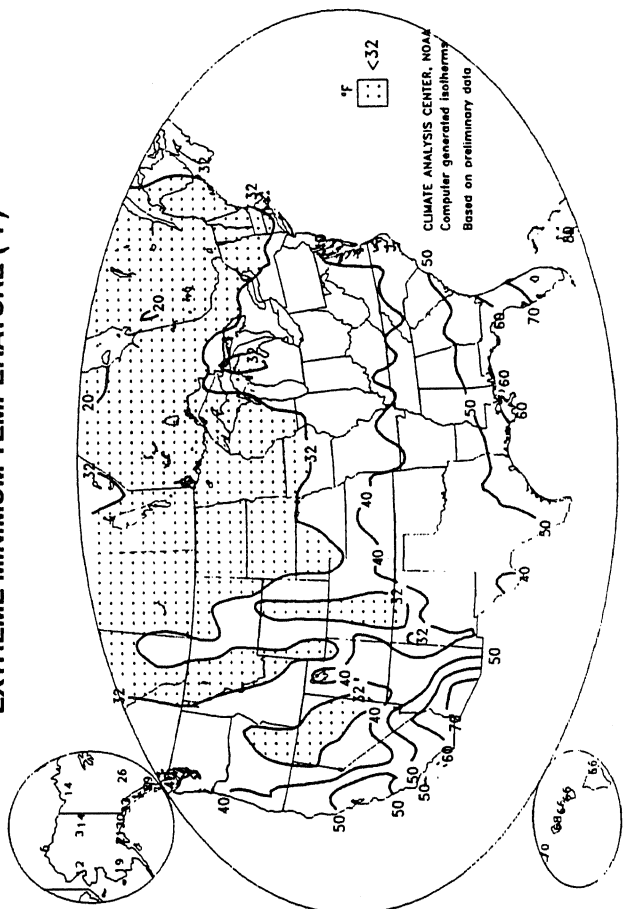
EXTREME MAXIMUM TEMPERATURE (°F)



DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)



EXTREME MINIMUM TEMPERATURE (°F)



2-WEEK GLOBAL TEMPERATURE ANOMALIES

SEPTEMBER 20 – OCTOBER 3, 1992

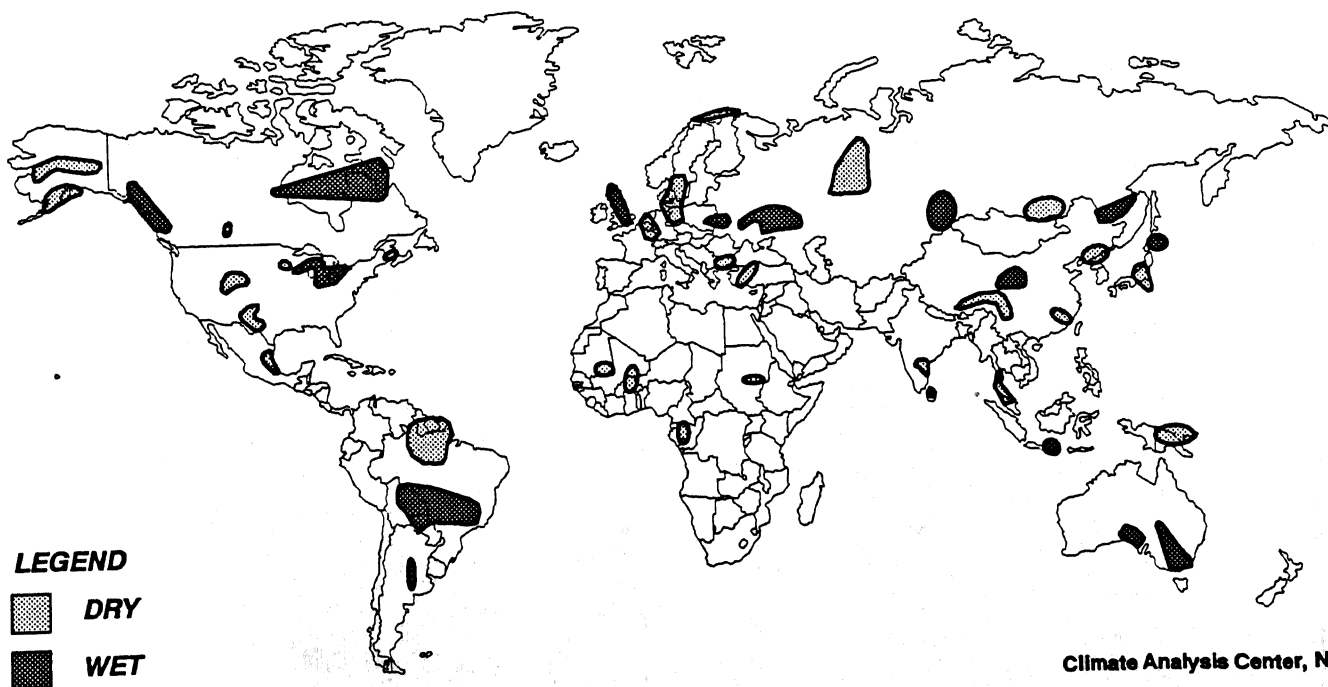


Climate Analysis Center, NOAA

Shading depicts regions where temperature anomalies were estimated to be within the warmest 10% or coldest 10% of climatological occurrences.

4-WEEK GLOBAL PRECIPITATION ANOMALIES

SEPTEMBER 6 – OCTOBER 3, 1992



Climate Analysis Center, NOAA

Shading depicts regions where precipitation anomalies were estimated to be within the wettest 10% or driest 10% of climatological occurrences.

